



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,922	12/04/2001	Sergey A. Lukyanov	CLON-035CIP	9351
41064	7590	02/09/2005	EXAMINER	
BOZICEVIC, FIELD & FRANCIS (BD BIOSCIENCES)			SNEDDEN, SHERIDAN	
1900 UNIVERSITY AVENUE			ART UNIT	
SUITE 200			PAPER NUMBER	
EAST PALO ALTO, CA 94303			1653	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/006,922

**Applicant(s)**

LUKYANOV ET AL.

**Examiner**

Sheridan K Snedden

**Art Unit**

1653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23,26-28,30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) 26,28 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23,27 and 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 1653

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office Action is in response to Paper filed 10/5/2004. Claims 1-23, 27 and 31 are under examination.

### ***Withdrawal of Objections and Rejections***

2. The objections and/or rejections not explicitly restated or stated below are withdrawn.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5, 8-10, 12-23, 27, and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims are directed to a genus of any nucleic acid encoding any fluorescent protein from class Anthozoa, where the organism of origin does not exhibit bioluminescence. Applicants have isolated DNAs from several different organisms which cross hybridize and encode a fluorescent protein that appears to share an evolutionary relationship with green fluorescent protein (GFP). Identification of members of a species of genes encoding specific fluorescent proteins is not deemed sufficient to describe the genus of all DNAs of

Art Unit: 1653

anthozoans which encode proteins that fluoresce. There appears to be no nexus between fluorescence and shared structure and function.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-5, 8-10, 12-23, 27, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderluh *et al.* Anderluh *et al.* provides for the cloning, sequencing and expression in *E. coli* of the gene encoding Equinatoxin II, which is a cytotoxin from the anemone *Actinia equina* (Anthozoa class). It is deemed anticipatory for the claimed subject matter

Art Unit: 1653

because Macek *et al.* showed that Equinatoxin II is fluorescent because of its tryptophan residues. Thus, the reference clearly anticipates the invention as recited in the claims.

6. Claims 1-23, 27 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsein *et al.* (US 6,342,379). Tsien *et al.* teach a polynucleotide 100% identical to SEQ ID NO: 11 (see SEQ ID NO: 6). Vectors and hosts cells are also taught (see section heading: IV Transfection and Expression of Reagents or V. Transgenic Organisms). Thus, the reference clearly anticipates the invention as recited in the claims.

### ***Conclusion***

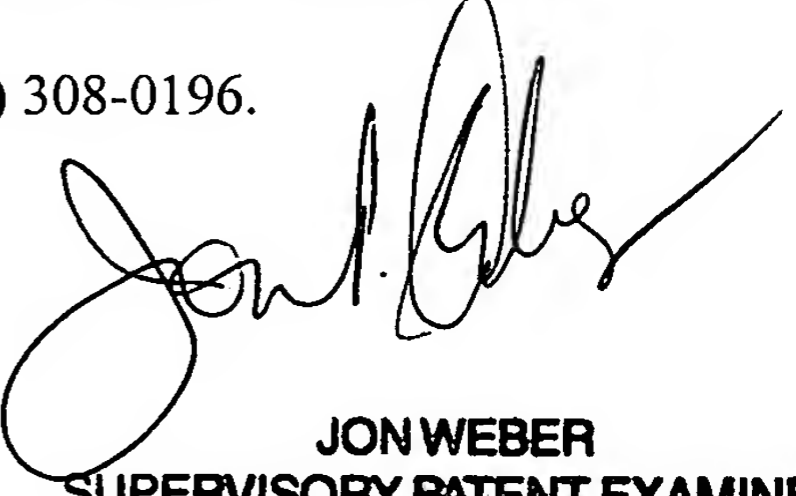
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheridan K Snedden whose telephone number is (571) 272-0959. The examiner can normally be reached on Monday - Friday, 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached on (571) 272-0925. The fax phone number for regular communications to the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

SKS  
February 4, 2005

SKS

  
JON WEBER  
SUPERVISORY PATENT EXAMINER

Untitled

RESULT 1  
 AR183915  
 LOCUS AR183915 678 bp DNA linear PAT 20  
 -APR-2002  
 DEFINITION Sequence 6 from patent US 6342379.  
 ACCESSION AR183915  
 VERSION AR183915.1 GI:20227884  
 KEYWORDS .  
 SOURCE Unknown.  
 ORGANISM Unknown.  
 Unclassified.  
 REFERENCE 1 (bases 1 to 678)  
 AUTHORS Tsien,R.Y. and Gonzalez,J.E. III.  
 TITLE Detection of transmembrane potentials by optical methods  
 JOURNAL Patent: US 6342379-A 6 29-JAN-2002;  
 FEATURES Location/Qualifiers  
 source 1. .678  
 /organism="unknown"  
 /mol\_type="unassigned DNA"

ORIGIN

Query Match 100.0%; Score 678; DB 6; Length 678;  
 Best Local Similarity 100.0%; Pred. No. 0;  
 Matches 678; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAGGTCTTCCAAGAATGTTATCAAGGAGTTCATGAGGTTTAAGGTTTCGCATGGA  
 AGGA 60

|||||  
 Db 1 ATGAGGTCTTCCAAGAATGTTATCAAGGAGTTCATGAGGTTTAAGGTTTCGCATGGA  
 AGGA 60

Qy 61 ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGAGGGGAGGCCATACGA  
 AGGC 120

|||||  
 Db 61 ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGAGGGGAGGCCATACGA  
 AGGC 120

Qy 121 CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGA  
 TATT 180

|||||  
 Db 121 CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGA  
 TATT 180

Qy 181 TTGTCACCACAATTTTCAGTATGGAAGCAAGGTATATGTCAAGCACCTGCCGACAT

Untitled

ACCA 240

||||

Db

ACCA 240

181 TTGTCACCACAATTTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCCTGCCGACAT

Qy

TGAA 300

241 GACTATAAAAAGCTGTCATTTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTT

||||

Db

TGAA 300

241 GACTATAAAAAGCTGTCATTTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTT

Qy

CTAC 360

301 GACGGTGGCGTCGTTACTGTAACCCAGGATTCCAGTTTGCAGGATGGCTGTTTCAT

||||

Db

CTAC 360

301 GACGGTGGCGTCGTTACTGTAACCCAGGATTCCAGTTTGCAGGATGGCTGTTTCAT

Qy

GACA 420

361 AAGGTCAAGTTCATTGGCGTGAACCTTCCTTCCGATGGACCTGTTATGCAAAAGAA

||||

Db

GACA 420

361 AAGGTCAAGTTCATTGGCGTGAACCTTCCTTCCGATGGACCTGTTATGCAAAAGAA

Qy

AGAG 480

421 ATGGGCTGGGAAGCCAGCACTGAGCGTTTGTATCCTCGTGATGGCGTGTTGAAAGG

||||

Db

AGAG 480

421 ATGGGCTGGGAAGCCAGCACTGAGCGTTTGTATCCTCGTGATGGCGTGTTGAAAGG

Qy

TATT 540

481 ATTCATAAGGCTCTGAAGCTGAAAGACGGTGGTCATTACCTAGTTGAATTCAAAAG

||||

Db

TATT 540

481 ATTCATAAGGCTCTGAAGCTGAAAGACGGTGGTCATTACCTAGTTGAATTCAAAAG

Qy

GGAT 600

541 TACATGGCAAAGAAGCCTGTGCAGCTACCAGGGTACTACTATGTTGACTCCAAACT

||||

Db

GGAT 600

541 TACATGGCAAAGAAGCCTGTGCAGCTACCAGGGTACTACTATGTTGACTCCAAACT

.....

\_\_\_\_\_

Page 3